

PENICAUD ET AL.
Appl. No. 10/585,094
Atty. Ref.: 5006-9
Amendment
April 27, 2009

AMENDMENTS TO THE CLAIMS:

Please amend the claims as follows:

1. (Currently Amended) A method of dissolving carbon nanotubes, characterized in that it comprises the comprising

(i) providing reduction of nanotubes, which results in negatively charged nanotubes with positive counterions by reducing carbon nanotubes; and
(ii) adding a polar organic solvent to the negatively charged nanotubes of step (i), resulting in a dissolved phase of negatively charged nanotubes with positive counterions in the solvent.

2. (Currently Amended) The method of as claimed in claim 1, wherein characterized in that the counterions are alkali metal cations.

3. (Currently Amended) The method of as claimed in claim 1, wherein the step of providing negatively charged nanotubes comprises adding characterized in that it includes the addition, under anaerobic conditions, to the nanotubes of a salt of formula:



to the carbon nanotubes, wherein in which:

[[[-]]] A^+ represents a cation of an alkali metal ion, such as lithium or sodium; and

[[[-]]] B^- represents an anion of a polyaromatic compound, so as to electrically charge the nanotubes.

4. (Currently Amended) The method of as claimed in claim 3, wherein characterized in that the polyaromatic compound is chosen from naphthalene,

benzophenone, fluorenone and anthraquinone.

5. (Currently Amended) The method of as claimed in claim 1, wherein characterized in that the polar organic solvent is solvents are chosen from sulfolane, dimethyl sulfoxide, dimethylformamide, N-methylpyrrolidone [[and]] or N-methylformamide.

6. (Currently Amended) The method of as claimed in claim 1, wherein characterized in that the carbon nanotubes contain boron atoms in place of as a substitute for carbon atoms.

7. (Currently Amended) The method of as claimed in claim 1, wherein characterized in that the carbon nanotubes used are single-walled nanotubes.

8. (Currently Amended) The method of as claimed in claim 1, characterized in that wherein the carbon nanotubes used are multi-walled nanotubes.

9. (Currently Amended) The method of as claimed in claim 7, wherein characterized in that the carbon nanotubes used are hollow empty nanotubes.

10. (Currently Amended) The method of as claimed in claim 7, wherein characterized in that the carbon nanotubes used contain molecules, for example photosensitive molecules or fullerenes, salts, such as alkali metal halides, or else metal elements inside their hollow interior.

11. (Currently Amended) The method of as claimed in claim 1, further comprising characterized in that it further includes a step of purifying the nanotubes.

12. (Currently Amended) The method of as claimed in claim 1, further comprising characterized in that it further includes a step of functionalizing the surface

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or the ends of the nanotubes.

Claims 13-15. (Canceled)

16. (New) A method of dissolving carbon nanotubes comprising
- (i) providing reduced, negatively charged nanotubes with positive counterions by reducing carbon nanotubes; and
 - (ii) adding a polar organic solvent to the negatively charged nanotubes of step (i), resulting in a dissolved phase of negatively charged nanotubes with positive counterions in the solvent.